

CLAIMS

1. A vehicle having a forward end including a conduit spaced from a support surface for the vehicle, said conduit having a source of air under pressure and is spaced sufficiently from any normal abutment on said support surface to avoid said abutment and operable to project a curtain of air from said forward end toward said support surface with sufficient flow and direction to form a virtual airdam sufficiently to reduce vehicle drag.
2. The vehicle of claim 1 including a series of ports in the conduit for projecting the curtain of air.
3. The vehicle of claim 1 including a slit in the conduit for projecting the curtain of air.
4. The vehicle of claim 1 wherein the source of air is a fan or blower.
5. The vehicle of claim 1 wherein the operation of the source of air is adjustable.
6. The vehicle of claim 1 including a fuel cell and a radiator in an air flow communication with said source of air under pressure, and a shroud connected to said source of air and configured to form the conduit.
7. A vehicle having a forward end enclosing an engine needing cooling air flow and including a conduit spaced from a support surface for the vehicle, said conduit having a source of air pressure and spaced sufficiently from any normal abutment on said support surface to avoid said abutment and operable to project a curtain of air from said forward end toward said support surface with sufficient flow and

direction to form a virtual airdam sufficiently to reduce vehicle drag while maintaining said cooling air flow for said engine.

8. The vehicle of claim 7 including a series of ports in the conduit for projecting the curtain of air.

9. The vehicle of claim 7 including a slit in the conduit for projecting the curtain of air.

10. The vehicle of claim 7, wherein the source of air is a fan or blower.

11. The vehicle of claim 10 including a radiator in air flow communication with said fan or blower.

12. A method of reducing drag and increasing volumetric airflow for cooling in a moving vehicle's engine compartment positioned above a vehicle support comprising:

5 forming an air conduit to form a jet-forming outlet positioned to direct the air away from said compartment and toward said vehicle support; and

supplying air through said conduit in a sufficient volume to said jet-forming outlet to form a virtual airdam at least partially between said engine  
10 compartment and said vehicle support which sufficiently intercepts an air stream created by the moving vehicle to reduce vehicle drag.

13. A virtual airdam assembly for a movable support comprising an elongated conduit configured to be supportable on the underside of a front end portion of the movable support, said conduit having an inlet opening configured for receiving air

and an outlet opening configured to form a virtual airdam with the air received to reduce  
5 drag on the movable support.

14. The virtual airdam assembly of claim 13 wherein the movable  
support is a vehicle front engine compartment adapted to receive ram air and the outlet of  
the conduit is configured to project a curtain of air away from the engine compartment  
with sufficient flow to increase volumetric air flow for cooling in said engine  
5 compartment.

15. The virtual airdam assembly of claim 13 including a blower for  
supplying at least a portion of the air received by said inlet opening of said conduit.